

being anticipated by Balakrishnan. This rejection is respectfully traversed. An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. As discussed in detail below, Balakrishnan does not meet the requirements for an anticipation rejection.

In accordance with Applicants' invention as set forth in claims 1 and 13, the transmission bit rate for transmitting the current picture after encoding thereof is based on the channel's encoding bit rate, and is allocated following a system delay that follows the allocated encoding bit rate, to minimize a rate mismatch between an input and an output of the modeled decoder buffer.

In other words, with Applicants' claimed invention, the targeted transmission bit rates are the delayed versions of the encoding bit rates for each channel, subject to the decoder buffer constraints. The targeted transmission bit rates are derived from the encoding bit rates, which are in turn dependent on the relative complexities of the input videos, but they are not dependent on the encoder buffer levels (See, e.g., Applicants' claims 1 and 13).

Balakrishnan indicates that the signals are encoded, transmitted, and decoded in accordance with the MPEG-2 T-STD or VBV models (Col. 6, lines 32-34). The T-STD and VBV models are constructs of the MPEG2 standard, so all MPEG-2 compliant transport streams have to satisfy the no overflow/no underflow conditions of these models. All such encoding systems will have mechanism to prevent VBV overflow/underflow. The present invention differs from Balakrishnan in how the transmission bit rate (which is called the output bit rate or simply bit rate $R_i(t)$ in Balakrishnan (see, e.g., Col. 14, line 8)) is

determined.

In Balakrishnan, using constraints derived from equations (14), (16), (18), and (19), the output bit rates are determined by minimizing the encoder buffer fullness across all channels (Columns 14-15). Thus, the output bit rates are formulated as a result of a constraint minimization problem, as discussed at Column 16, line 24, et. seq.

In contrast, with the present invention, there is no need to check for encoder buffer overflow and underflow. Balakrishnan is to the contrary, as equations (17) through (19) are used to impose constraints on the output bit rate so as to prevent encoder buffer overflow and underflow (Col. 15, line 23 through Col. 16, line 4).

Accordingly, Balakrishnan does not disclose or remotely suggest allocating a transmission bit rate for transmitting the current picture after encoding thereof, where for each channel, the transmission bit rate is based on the channel's encoding bit rate, and is allocated following a system delay that follows the allocated encoding bit rate, to minimize a rate mismatch between an input and an output of the modeled decoder buffer, as set forth in Applicants' claims 1 and 13.

As Balakrishnan does not disclose each and every element of the invention as claimed, the rejections under 35 U.S.C. § 102(b) are believed to be improper, and withdrawal of the rejections is respectfully requested. See, *Akamai Technologies Inc., supra*.

In view of the above, Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of Balakrishnan, taken alone or in combination with any of the other prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the above discussion. Applicants' silence as to any of

the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the presently pending claims, and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



Douglas M. McAllister
Attorney for Applicant(s)
Law Office of Barry R. Lipsitz
Registration No. 37,886
755 Main Street
Monroe, CT 06468
(203) 459-0200

ATTORNEY DOCKET NO.: GIC-620

Date: November 5, 2004